

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/00342

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 A23K1/165 A23K1/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A23K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, FSTA, BIOSIS

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00 47060 A (DSM NV) 17 August 2000 (2000-08-17) cited in the application claims ---	1,12-19
A	WO 97 16076 A (NOVONORDISK AS ) 9 May 1997 (1997-05-09) claims; examples ---	1,12-16
A	WO 01 25411 A (NOVOZYMES AS) 12 April 2001 (2001-04-12) page 27, line 25 -page 30, line 24; claims 1,12,26-29 ---	1,12-16
A	DE 199 29 257 A (BASF AG) 28 December 2000 (2000-12-28) claims ---	1,12-16
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

**\* Special categories of cited documents :**

\*A\* document defining the general state of the art which is not considered to be of particular relevance

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\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

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\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Name and mailing address of the ISA

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A	<p>PATENT ABSTRACTS OF JAPAN  vol. 1996, no. 01,  31 January 1996 (1996-01-31)  &amp; JP 07 236430 A (NIPPON SODA CO LTD),  12 September 1995 (1995-09-12)  abstract</p>	1,13,15
A	<p>US 5 391 371 A (JENSEN POUL E ET AL)  21 February 1995 (1995-02-21)  claims  &amp; EP 0 569 468 A  18 November 1993 (1993-11-18)  cited in the application</p>	1,12,13

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Information on patent family members

International Publication No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0047060	A	17-08-2000	AU 3656100 A	29-08-2000
			BR 0004713 A	19-12-2000
			CA 2327692 A1	17-08-2000
			CN 1294495 T	09-05-2001
			WO 0047060 A1	17-08-2000
			EP 1069832 A1	24-01-2001
			JP 2002536005 T	29-10-2002
			NO 20005088 A	07-12-2000
			PL 343506 A1	27-08-2001
			US 2003054511 A1	20-03-2003
WO 9716076	A	09-05-1997	AU 7489896 A	22-05-1997
			CN 1201372 A	09-12-1998
			WO 9716076 A1	09-05-1997
			EP 0858266 A1	19-08-1998
			JP 11514240 T	07-12-1999
WO 0125411	A	12-04-2001	AU 7405200 A	10-05-2001
			AU 7405400 A	10-05-2001
			CN 1382212 T	27-11-2002
			CN 1382213 T	27-11-2002
			WO 0125411 A1	12-04-2001
			WO 0125412 A1	12-04-2001
			EP 1224272 A1	24-07-2002
			EP 1224273 A1	24-07-2002
DE 19929257	A	28-12-2000	DE 19929257 A1	28-12-2000
			CN 1371247 T	25-09-2002
			WO 0100042 A1	04-01-2001
			EP 1189518 A1	27-03-2002
			JP 2003503037 T	28-01-2003
JP 07236430	A	12-09-1995	NONE	
US 5391371	A	21-02-1995	AT 120616 T	15-04-1995
			DE 69201952 D1	11-05-1995
			DE 69201952 T2	23-11-1995
			WO 9212645 A1	06-08-1992
			DK 569468 T3	07-08-1995
			EP 0569468 A1	18-11-1993
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			US 2003054511 A1	20-03-2003
WO 9716076	A	09-05-1997	AU 7489896 A	22-05-1997
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WO 0125411	A	12-04-2001	AU 7405200 A	10-05-2001
			AU 7405400 A	10-05-2001
			CN 1382212 T	27-11-2002
			CN 1382213 T	27-11-2002
			WO 0125411 A1	12-04-2001
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DE 19929257	A	28-12-2000	DE 19929257 A1	28-12-2000
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